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Zaharevitz, Walter

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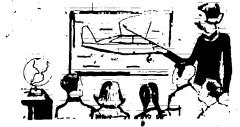
\*Aviation Occupations

#### ABSTRACT

This booklet, one in a series on aviation careers, outlines the variety of careers available in airports. The first part of the booklet provides, general information about/careers at airports, while the main part of the booklet outlines the following nine job categories: airport director, assistant airport director, engineers, support personnel, airport servicepersons, terminal concessionaires, safety employees, fixed-base operators, and line persons. For each of these job classifications, information on the nature of the work, working conditions, where the jobs are, wages and benefits, opportunities for advancement, requirements to enter the job, opportunities for training, and outlook for the future is provided. A chart at the end of the booklet lists airports by states according to types of facilities. (RC)

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# **AVIATION EDUCATION**



DEPARTMENT OF TRANSPORTATION / FEDERAL AVIATION ADMINISTRATION OFFICE OF AVIATION POLICY/WASHINGTON, D.C. 20591

Aviation Careers Series

AIRPORT CAREERS

bÿ ♥ Wāltēr Zāhārēvitz

'(Rēvisēd 1980)

## U.S. DEPARTMENT OF EDUCATION NATIONAL INSTITUTE OF EDUCATION EDUCATIONAL RESOURCES INFORMATION

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#### GENERAL INFORMATION

An airport can be a cleared grassy strip of level land or an elaborate complex of thousands of acres of ground, runways, roadways, buildings, parking lots, equipment and services with the number of employees equal to that of a small city. Several thousands of the nation's approximately 14,600 airports are attended (that is, they offer at least a minimum of daylight service) and they range in service from one providing just aviation gasoline and a coke vending machine to one offering thousands of items and services required by the air traveler and by the airlines and operators of general aviation aircraft.

Airports may be privately owned by a single operator who carries on all the functions of the airport with or without assistants, or by a group of private investors. Or an airport may be owned and operated by a city, county, regional, or inter-state governmental authority.

#### AIRPORT DIRECTOR

#### NATURE OF THE WORK

Airports are usually operated by a director or manager responsible either to the owners of the airport or to the local government authorities. The Airport Director has been described as a "mixture of aviation expert, real estate operator, construction engineer, electronics wizard, management genius and politician." The director is involved in such executive business skills and activities as the following:

- 1. Making and enforcing airport rules and regulations.
- 2. Planning and supervising maintenance programs.
- 3. Negotiating leases with airport tenants, such as aircraft repair stations, terminal concessionaires and airlines.
- 4. Surveying future needs of the airport and making recommendations.
- 5. Keeping records and making required reports.
- 6. Setting up the airport budget.
- 7. Promoting the use of the airport.
- 8. Training and supervising employees responsible to the Airport Director.

Depending upon the size of the airport, the director may or may not have one or more assistants such as an assistant director, engineer, controller, personnel officer, maintenance superintendent and supporting office workers such as secretaries, typists and clerks.

If the Airport Director is self-employed as a small airport operator, he or she probably also operates an aircraft repair station, sells aviation fuel, gives flight lessons and offers air taxi or charter flights in addition to operating the airport.

#### WORKING CONDITIONS

The Director works in an office usually in the terminal building at the airport, has regular office hours except in times of emergencies, and may be required to travel to settle agreements with airline tenants or to confer with state and federal officials. If she or he operates a very small airport, this person may work long hours in the aircraft repair station, giving flying lessons, and making charter flights. In such cases, much of the time is spent outdoors. In many cases, the Airport Director is a part of the local government and would be involved in official meetings and community projects, especially those concerned with aviation.

#### WHERE THE JOBS ARE

Attended airports exist in every state of the union. Most of the attended airports are in California, Florida, Illinois, Indiana, Michigan, Missouri, Ohio, New York, Pennsylvania and Texas. Airlines serve more than 600 airports, while the remaining attended airports are used primarily by general aviation aircraft.

#### WAGES AND BENEFITS

Annual wages range from about \$9,000 for the airport manager at a small general aviation airport to about \$45,000 for the director of a major international airport. In general, the benefits of the Airport Director regarding such items as vacation and sick leave, social security and retirement plans are comparable to those in business and industry.

#### OPPORTUNITIES FOR ADVANCEMENT

Unless the operator is a private owner and is self-employed, the job of an airport director is not an entry level job, but is open to those with experience and training. An Airport Director may progress by moving to an assistant director's job or director's job at a larger airport and/or may also move upward to a commissioner of airports or to a state-level job concerned with state regulation of airports. Job opportunities are often involved in political activities and appointments frequently are made on that basis, especially if the job does not come under Civil Service regulations.

#### REQUÍREMENTS TO ENTER THE JOB

Directors of airports with airline service usually are required to have a college degree in one of the following areas: airport management, business administration, public administration or aeronautical or civil engineering. One study evaluated the importance of a number of educational areas in airport management. Rated as "very important" by airport managers were: public relations, air transportation, business management, bachelor's degree, and personnel administration. The Airport Director is also required to have had experience as a director or assistant at an airport. Directors of small airports may qualify in some cases if they

have only a high school diploma, but usually must have a pilot's license and three to five years' experience in several kinds of jobs associated with airport services -- such as fixed base operator, superintendent of maintenance, or assistant to the airport director.

The Airport Director must be familiar with state and federal air regulations (especially those pertaining to airports), zoning laws, environmental impact. legal contracts, security, crash and rescut, public relations procedures, use of airport equipment, the proper handling of aircraft and airline operations, if the airport is served by airlines. Airport Directors must show leadership qualities, that, initiative, ability to get along with others, and good judgment. They must satisfy the air service demands of the general public.

#### OPPORTUNITIES FOR TRAINING

Numerous universities offer courses and degrees in airport administration, public administration, business administration, and aeronautical or civil engineering. Some of these universities also offer flight training which, in conjunction with airport administration courses, would give the applicant a general knowledge of aviation and the airport's role in the community.

#### OUTLOOK FOR THE FUTURE

The economic contribution of airports has been estimated at several hundred billion dollars. The predictions for large increases in the number of airline passengers, air cargo tonnage, and the production and use of general aviation aircraft over the next decade will have their effects on airports. Existing airports will be enlarged. As the general aviation fleet grows, more airports will come into existence with fixed base operators to service these additions to the total number of aircraft in use. More airports will come into existence as towns without airports, trying to attract new industry, will become aware of industry's increasing insistence on airport facilities near plant sites.

The present heavy air traffic at many large airports, creating landing and take-off delays, may bring about the construction of a network of smaller "satellite" airports to service general aviation aircraft and helicopters that will take the air travelers to and from the major airport for their long-haul trips. All this growth will provide some additional opportunities for the airport director and members of the supporting staffs.

#### OTHER CAREERS AT THE AIRPORT

Assistant Airport Director: The assistant helps the director carry out administrative responsibilities and may be in charge of maintenance employees, airport equipment, airport tenant relations, or any of the other kinds of work associated with an airport. The salary will vary according to the size of the airport. Again, depending upon the size of the airport, requirements for the job of assistant director range from a high school diploma to an engineering degree. The larger metropolitan airports require three to seven years of experience at airports served by a number of airlines.

Engineer: This employee plans improvements and expansion of the airport, checks on plans submitted by architects and contractors, oversees construction, handles real estate and zoning problems, administers Federal Aid to Airports programs, and directs maintenance of runways, taxiways, hangars, terminal buildings and grounds. Engineers are employed mostly by larger airports and a degree in engineering, plus three to seven years of experience are required.

Other Employees on the Airport Director's staff perform the usual duties of their chosen careers: controller, secretary, typist, etc., and salaries, qualifications and training opportunities are the samewas for other workers in these areas of employment.

Airport Serviceperson: Employees work under the direction of the airport manager or engineer. May do one or more of the following jobs:

- 1. Fills holes, levels low places and bumps on runways and taxiways.
- 2. Cuts grass on airport grounds and maintains shrubbery.
- 3. Operates snow removal equipment.
- Services runway lights, replacing defective lamps and fuses.
- 5. Maintains electrical service on airport, paints buildings, and does general carpentry work on small repair jobs.

Large airports employ workers who specialize in one of the foregoing jobs, for example, airport electrician. Many trades and crafts are needed at the airport, although small airports usually contract for required maintenance. Training for such jobs, qualifications, wages, opportunity for advancement and union agreements are the same as for other workers in the trades and crafts.

Safety Employees: Airports with airline service must maintain fire-fighting and crash rescue equipment. This provides employment for small numbers of trained firefighters and rescue workers, some of whom may be responsible for the inspection of fire hazards on the airport premises and for reporting violations of airport fire regulations.

Terminal Concessionaires: Airport terminals provide services for air passengers such as restaurants, newsstands, gift and book shops, car rental agencies and skycap baggage service. (Only a few airlines employ skycaps; most leave this service to terminal concessions.) Workers in the airport flight kitchens cater to airlines that do not have their own flight kitchens. Workers in the foregoing concessions are mentioned only because they do have a place in the total employment picture of the airport.

Fixed Base Operator (FBO): A fixed base operator is a retail firm that sells general aviation products or services at an airport. The FBO may employ one or two people or may have a hundred workers. One or more of the following services are offered: aircraft airfame, engine and/or instrument repairs; flight training; air taxi service and charter flights; aircraft sales; aircraft fuel and parts; and aircraft exterior and/or interior modification.

The FBO employs aviation mechanics, flight instructors and aircraft sales persons, depending upon the size and scope of the operations. The FBO may also carry on a small aviation mechanics training operation, supervise the work of mechanics, if he or she is a licensed aviation mechanic, and may even arrange for ground transportation and overnight accommodations for general aviation pilots and their passengers.

The FBO's place of business may be a small hangar or shop with an adjoining office and perhaps a pilot's lounge, or an elaborate series of hangars, shops, offices, classrooms and showrooms. The hours are determined by the amount of time the FBO wants to devote to the business. Without assistants, the FBO probably spends long hours every day at the airport.

As the FBO is essentially an entrepreneur, the opportunities for increased business and income depend upon her or his own initiative and ability to keep up with changes in aircraft, aircraft equipment and services. The variety of activities in which an FBO can be involved in offer some assurance of stability of income.

It is difficult to determine just what are the requirements to become a fixed base operator. Certainly an interest in aviation and training as an aviation mechanic are basic. A pilot's license is not essential, but would provide a greater understanding of the many functions of a FBO, as well as contacts with pilots who may help the business. With a commercial pilot's license he or she could supplement the FBO income with air taxi and charter flights, and with a flight instructor's rating, the FBO could give flight lessons. Some training in business administration would also be helpful in setting up an efficient business operation.

The fixed base operator has a bright future. Today's general aviation active fleet numbers about 198,000 aircraft. By 1990, this figure is expected to increase to about 310,800. All these aircraft will need fuel, parts, accessories, and regular maintenance and overhauls. They will need pilots to fly them. Aircraft servicing and maintenance, flight instruction and fuel are three services offered by most FBOs. They will continue to be offered in increasing volume as the general aviation fleet increases in numbers. Airports presently

unattended will gradually offer various services to the general aviation pilot. Airports now having FBOs as tenants will be adding FBO facilities. Predictions for opportunities as a fixed base operator are very optimistic over the next 15 years, especially if the FBO can attract customers with an efficient, orderly and accommodating service.

person: The fixed base operator employs linepersons or ramp servicepersons who greet arriving aircraft, guide them to parking spots, assist pilots
to tie down their aircraft, and perform the familiar duties of a "gas station
attendant" -- filling the tanks with gas, checking the oil, emptying ash
trays, vacuuming the interiors, washing the windshield, and reporting to the
owner signs of incipient trouble, such as oil leaks.

Linepersons are usually in their teens and are interested in aviation and begin their aviation careers building up experience with aircraft under the guidance of a fixed base operator. They are usually paid an hourly rate and often work part time after school hours, on weekends and summers. One study reported a high hourly wage of \$7.13, a low of \$2.40 and a mean of \$3.51. With their earnings they often learn to fly or take up an aviation mechanic's trade. The lineperson's job is basic and leads to many aviation careers, especially those associated with airport administration, a fixed base operation, aviation mechanic, professional pilot or air traffic controller.

### U.S. CIVIL AND JOINT-USE AIRPORTS, HELTPORTS, STOLPORTS, AND SEAPLANE BASES ON RECORD WITH FAA, AS OF 2/31/78

		20 00 120012 1111 1111, 120 01 27,527,10				
: 		Type_of Facilities				
Location	: Total :Facilitie:	Airports	Heliports		:Scaplane : Bases : :	
Total	14,574	12,006	1,986	46	536	
Alabama Alaska Arizona Arkansas California Colorado:	147 756 209 163 822 272	182 160 570	13 42 25 1 234	0 0 2 0 3	0 : 194 : 0 : 2 : 15 : 4	
Connecticut Delaware District of Columbia* Florida Georgia Hawaii	104 32 17 454 278 56	23 2 345	42 9 14 91 39 15	2 0 1 2	6: 0: 1: 17: 0: 0:	
Idaho : Illinois : Indiana : Iowa : Kansas : Kentucky : Idaho : Idaho : Iowa : Iowa : Idaho :	190 901 257 317 257 101	285 245 357	15 135 32 10 10	0 3 0 0 1 1	3: 10: 0: 1: 4: 0:	
Louisiana	287 157 148 140 418 220	108	89 5 35 43 16 14	0 2 3 2 1	21 : 39 : 2 : 12 : 8 : 68 :	
Mississippi Missouri Montana Nebraska Nevada New Hampshire	. 160 371 172 322 120	152 334 168 310 102 40	8 31 4 12 17	0 1 5 0 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0	0 5 0 0	
New Jersey. New Mexiko. New York. North Carolina. North Dakota.	263 142 498 270 217 584	126 , 132 386 229 214 494	126 10 81 19 _3 81	0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 : 0 : 30 : 2 : 0 : 7 :	
Okiuhoma. Oregon. Pennsylvania, Rhode Island. South Carolina. South Dakota.	288 302 692 23 126 142	274 24 <u>3</u> 525 15 116 ,138	13 55 147 6 10	0 3 2 0 0 0	1 : 2 : 18 : 2 : 0 : 0 : 0	
Tennessee Texas Utah. Vermont _ Virginia _ Washington	150 : 1,298 : 95 : 61 : 255 : 365 :	123 1,139 7 82 - 48 219 272	24 : 150 : 11 : 10 : 30 : 81 :		2 6 1 1: 4: 11:	
West Virginia Wisconsin Wyoming	71 : 371 : 94 :	.59 .342 .89	12 12 5	=0 1 0	_0 : 16 : 0 :	
Puerto Rico Vingin Islands South Pacific Islands	27 : 6 : 16 :	16 2 16	10 1 0	0 :	1 3 0	

<sup>\*</sup> FAA identifies Dulles International Airport as being "located in D.C." (Includes facilities open and those closed to public.)



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